

COMPLEMENTARY SOURCE FOLLOWER CIRCUIT CONTROLLED BY BACK BIAS VOLTAGE

Abstract

A complementary source follower circuit has an N-channel type transistor and a P-channel transistor. The threshold voltage of each transistor is independently controlled by a back bias voltage control circuit so that the input voltage and the output voltage relationship can be made linear without the use of an additional circuit such as a level shifting circuit. Also, power consumption can be reduced when the circuit is in standby mode by using the back bias voltage control circuit to achieve non-linearity. A back bias voltage control circuit can also be used to control the threshold voltage of a transistor in series with a resistance load to reduce power usage.